Arts & Communications: Information Technology Concentration
End of Program Assessment Blueprint

Applies to the following programs:

CIP Code	Common Name
11.0901	Computer Systems Networking & Telecommunications

Core Hardware   25%

Essential Computer Parts   15%
The student will be able to:
   A. Identify components of a computer
   B. Compare and contrast features of desktop versus notebook computer
   C. Describe potential points of failure on desktop and laptop computers
   D. Compare and contrast functions of computer hardware elements
   E. Compare and contrast functions of computer software elements

Motherboard Fundamentals   5%
Identify different types of expansion buses, memory buses, cooling, chip sets

Electrostatic Discharge (ESD)   2%
The student will be able to:
   A. Demonstrate when ESD precautions are necessary
   B. Describe location of grounding clip attachment
   C. List items which enable electrical testing and preventative measures
      for ESD damage

Math   2%
Calculate how fast a bus is. What is the data rate for a _____ connecter?

Tools   1%
Correctly name certain types of fasteners, cleaning the inside of PCs – use a
special vacuum – compressed air. Multimeter.

Peripheral Hardware   10%

      Printers   4%
      Three main types of printers (impact, ink jet/bubble jet, laser printer, and thermal)
      Process for laser printing (CCDDTDF: Cleaning, conditioning)
      Process for inkjet printing
      Cleaning/Servicing

      Input Devices   2%
      The student will be able to:
           A. Compare and contrast keyboards, mice and pointing devices, bar code readers, biometric, and touch screen devices
           B. Compare and contrast various ports and their function in installing input devices

      Multimedia Devices   2%
      The student will be able to:
           A. Discuss functions of webcams, digital cameras, sound cards, microphones, and video capture cards
           B. Compare and contrast various ports and their function in installing multimedia devices

      Portable Storage Devices   2%
      The student will be able to:
           A. Compare and contrast various portable storage devices
           B. Compare and contrast various ports and their function in installing portable storage devices

Operating Systems   25%

      Operating Systems   10%
      The student will be able to:
           A. Describe common operating systems (Windows, OS, Linux, Unix)
           B. Identify major systems management tools included in common operating systems
           C. Licensing: Difference between general and public license
           D. Use: parts of a window, mouse clicks, folder versus directory

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Installing and Upgrading Operating Systems 5%
The student will be able to:
  A. Explain the verification process showing a system has sufficient resources and free disk space for installation
  B. List the minimum hardware requirements for common operating systems
  C. Describe various installation methods that can be used to install operating systems (booting from DVD or CD, network, drive imaging, recovery CD or disk partition, booting from downloaded floppy disk images)

Network Operating Systems   3%
The student will be able to:
  A. List the three functions every NOS must perform
  B. Compare general versus special-purpose NOS
  C. List various NOS systems and software (UNIX, Linux, Solaris, Novel NetWare and Open Enterprise Server, Windows Server)

Math   2%
Partitioning
How much virtual memory to install

Security   5%
Patching, firewall, automatic updates

Applications (Utilities/Tools)   10%

Application Performance, Troubleshooting, and Security 10%
The student will be able to:
  A. Compare and contrast functions of common applications
  B. Describe various installation methods that can be used to install applications
  C. Describe process for stopping applications that are unresponsive
  D. Describe a potential solution for:
      1) Not having enough disk space on C: drive and/or root folder
      2) Computer not meeting minimum requirements for RAM/CPU speed
      3) Application being incompatible with Operating System
  E. Use and purpose of anti-virus, precautionary steps.

Networks   **15%**

    General   5%
    Hardware   5%, and
    Networking   3%

The student will be able to:

    A. Describe LANs and WANs
    B. Identify common LAN and WAN configurations
    C. Identify network elements critical to establishing a LAN and WAN (hardware)
        1) Identify various switches, bridges, routers, and operating planes
    D. Discuss functions of network elements in properly configured LAN and WAN
    E. Describe security issues and solutions associated with LANs and WANs

Math   2%
Binary, hex conversions. Calculate network address space. Meters to Feet.

Employability Skills   **15%**

    General   4%

The student will be able to:

    A. Demonstrate the ability to collect information, explore, and make personal decisions about careers
    B. Prepare a resume and cover letter with proper grammar and format
    C. List uniform, personal hygiene, appearance, and behavior codes common to IT industry
    D. Demonstrate an understanding of the importance of being reliable and productive on the job (i.e., following instructions, attendance, time management)
    E. Demonstrate teamwork, respect, and tolerance in the IT industry
    F. Demonstrate a positive attitude in the workplace and the acceptance of constructive criticism
    G. Demonstrate problem solving and conflict resolution abilities

IT Systems and Code of Ethics   3%

The student will be able to:

    A. Demonstrate a commitment to honor copyright and patent property rights

    B. Demonstrate respect for privacy

    C. Demonstrate respect for customer equipment

    D. Identify relevant laws pertaining to professional work

Safety   4%

Electrical, lifting, HAZMAT, MSDS

    A. Understand the potential hazards for technicians in working with computer equipment and supplies

Locating Information   2%

Math (invoicing, percentages, basics)   2%

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